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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers and improve the character of the service rendered to the public.

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Counsel: HARVEY D. GOULDER, - Cleveland.

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H. S. Hodge, - -	Detroit.		

AIDS TO NAVIGATION.

The conference held at Detroit on Monday by representatives of the Lake Carriers' Association and the Lighthouse Board came to a unanimous decision regarding the placing of the aids to navigation in question.

The following report rendered by the committee of the Lake Carriers' Association. was after a careful and general consideration, concurred in and endorsed by the three United States Lighthouse Inspectors so that a unanimous report will reach the Lighthouse Board at Washington for its final approval. The recommendations are as follows:

To Commanaer J. J. Reed, Chairman, Commander Nicol Ludlow, Commander E. J. Woodward, Lighthouse Inspectors 9th, 10th and 11th Districts.

GENTLEMEN:—As a committee appointed by the Lake Carriers' Association, at your suggestion and invitation to confer with you and present the wishes and views of the members of the association on the subjects referred to below, we beg to present the following:

As to the lights at the northwest and at the southwest corners of the cut at Lime Kiln Crossing, we would suggest that the most advantageous arrangement would be to continue the present lights until the gas buoys, or other permanent means of lighting, should you adopt any other, shall be established and put into position there, to this end, we are willing, and we propose to continue the present lights at a cost of $1,000 to cover the entire expense of maintaining lights there, for one year from July 1st, 1892, including the use of floats and furnishing others to replace if lost or injured.

2. Concerning the appropriation of $8,600 for three light-ships to be used in Detroit River, we would suggest that the necessary sum be used to establish one light-ship at Ballard's Reef, and that the remainder be held for establishing other light-ships hereafter, unless you could see your way clear to include the shoal spot between Detroit River light and Bar Point light-ship within the scope and purpose of the appropriation, or, unless you could thus include Grosse Pointe Channel at the head of Detroit River. At each of those places there is much need at present of a light-ship. At Grosse Pointe Channel the light could be placed to great advantage between the present government light-ship and the cluster of piles on the east bank of the channel.

We are willing and hereby propose to continue the present service at Ballard's Reef, including the entire cost of maintaining the light there, until you shall be able to make the permanent establishment at the rate of $800 a year from July 1st, 1892.

3. Concerning the proposed light-ships to be built out of the sixty thousand dollars originally appropriated for eleven foot shoal in Green Bay, we respectfully recommend as follows:

(a). We earnestly recommend that four light-ships without propelling machinery and without steam power, except such as is necessary for the fog-whistle, should be built instead of a less number. At the locations proposed by us and at any location which we have heard suggested as contemplated, we do not regard it necessary that the light-ships should be supplied with propelling machinery. Such light-ships without propelling machinery could be readily towed to any of these locations, those in Green Bay would not be likely to be carried away or get adrift at any time, and they could in spring and fall, as at all other times, when it might be necessary, find convenient and cheap facilities for being towed into position and to their winter quarters. The omission for propelling machinery would not only materially reduce the expense of construction and equipment, but would furnish the maximum of room and comfort in vessels of limited size.

(b). One light-ship located at or in the neighborhood of Eleven foot shoal would be a sufficient guide in that locality, and would render unnecessary, in our judgment any further lighting.

Another light-ship should be placed in Poverty Passage near Gravelly Island.

A third light-ship should go to mark the outer extremity of Peshtigo Shoal.

This leaves a fourth light-ship, which in our judgment can be used to best advantage at Poe's Reef, or near Poe's Reef at the head of Lake Huron, or else near the Corsica and northwest shoals at the foot of Lake Huron.

The strongest reasons exist in favor of each of these locations, but we are inclined to recommend and do recommend the location at the foot of Lake Huron, inasmuch as we feel justified in hoping that the applications already made and proceedings already had in that connection, will surely result in the lighting of Poe's Reef without the aid of the appropriation under consideration.

If you should favorably consider the propositions and suggestions above made in reference to continuing the present mode of lighting, the floats at the Lime Kiln Crossing and the light-ship at Ballard's Reef now in operation there, the association would be glad to contract through some individual whom it will designate as its representative in their behalf.

Respectfully submitted,
GEORGE P. MCKAY,
JAMES CORRIGAN,
HARVEY D. GOULDER.

NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN AND NORTHWESTERN LAKES—SQUAW ISLAND LIGHT-STATION.

Notice is hereby given that, on or about Oct. 10, 1892, a fourth-order fixed red light varied by a red flash every 15 seconds, will be exhibted from the structure recently erected on the northerly end of Squaw Island, the most northerly of the Beaver Island Group, north end of Lake Michigan, Michigan.

The light will illuminate the entire horizon.

The focal plane is about 60 feet above lake level, and the light may be seen in clear weather, the observer's eye 15 feet above lake level, about 15¼ miles.

The light will be shown from a black lantern surmounting a red-brick tower, 48 feet high from base to focal plane, square at the base and octagonal above, and forming the N. W. corner of a red brick dwelling with red roofs.

The approximate geographical position of the lighthouse, as taken from chart No. 10, north end of Lake Michigan, including the Beaver Island Group, U. S. Survey of the Northern and Northwestern Lakes is: Latitude, North, 45° 50′ (22″); Longitude, West, 85° 35′ (12′).

Bearings and distances of prominent objects are: Garden Island, N. tangent, E. S. E. ¼ E. (S. 76° E.) 3⅛ miles. Trout Island, W. tangent, S. W. ½ W. (S. 50° W.) 6¼ miles. Seul Choix Pointe Light-House, W. N. W., ¼ W. (N. 70° W.), 16½ miles. Scotts Point, N. N. W. ¾ W. (N. 31° 30′ W.), 9½ miles.

During thick or foggy weather a 10-inch steam whistle will be sounded blasts of 5 seconds' duration separated by alternate silent intervals of 20 and 40 seconds, thus:

Blast	Silent interval	Blast	Silent interval
5 sec.	20 sec.	5 sec.	40 sec.

The fog-signal house stands about 200 feet N. by E. from the light tower. It is a red-brick structure with corrugated iron roof painted brown.

Bearings are true and given approximately. Distances are in statute miles.

By order of the Lighthouse Board: James A. Greer, Rear-Admiral U. S. Navy, Chairman.

Office of the Lighthouse Board, Washington, D. C., Oct. 1, 1892.

THAT SUBMARINE WONDER AGAIN.

George C. Baker the inventor of the submarine boat built by the Detroit Boat Works has had another trial of the boat and she is now ready for final inspection by Commodore Folger, United States Navy, chief of the bureau of ordnance.

Mr. Baker has sunk $25,000 in his invention and thinks he has, beyond doubt, found the principles that will revolutionize marine warfare and open to the world a vast, undiscovered field, the misteries of the ocean deep. Many scientific men and practical engineers have examined the craft and found no possible contingency unanticipated.

The inventor is quoted as saying: "I think a boat could be made strong enough to go 500 feet deep. With these reversible propellers any direction can be taken. You can go up and down directly or at an inclined plane and turn around within the boat's own space.

But when used as a torpedo boat traveling need not be done any more than eighteen or twenty feet beneath the surface. The submarine craft has been the subject of experiment for 200 years, but I believe I have now got it. I can't for the life of me see why not. I can sink and force my boat under water to any depth that the frame will stand. I can propel it in any direction. The only drawback is a harmony of the forces, which we are rapidly reaching. As a torpedo boat for naval warfare there is absolutely no defense against it. It cannot be attacked under water and will have any ship at its mercy."

The boat has air enough for one man for seventy-five hours. But any quantity of air can be stored. The action of the electricity generates the oxygen, though not enough to be dangerous. The engines can be run for three hours from the batteries.

NEWS AROUND THE LAKES.

CLEVELAND, O.

The new shoal, about five miles north of Squaw island, and recently buoyed by the United States light-house inspector, is named the Lansing shoal.

Mr. W. I. Babcock, manager of the Chicago Ship-Building Co., visited this port on Monday, on business connected with the construction work at his ship-yard.

Some coal charters were placed Wednesday at the following figures: Sault Ste. Marie, 55 cents; Manitowoc, 50 cents; Bay City, 40 cents.

After she was docked in the Ship Owners' Dry Dock, Captain C. E. Benham, W. J. Miller and William Watterson held a survey on the steambarge S. Neff, recently sunk in the outer harbor. The repairs are placed at $7.800.

At the special meeting of the Finance Committee of the Lake Carriers' Association, held on Wednesday, the report of the committee on lightships was held on file and the committee continued, with power to act as future circumstances might transpire in the question of the aids to navigation for which the committe was appointed.

The United States steamer Michigan was in port for three days this week and looked as trim as it is possible to make this ancient representative of "Uncle Sam." She is making a leisurely cruise to Chicago, where she is to report on October 21, when she will be placed at the disposal of President Harrison for the opening or dedication of the World's Fair.

Mr. Powers, a well-known pioneer ship-builder, of Kingston, Ont., visited friends in shipping circles here on Tuesday. Chatting, while in a reminiscent mood, in THE RECORD office, his half a century's experience on fresh water was more than entertaining.

The bungling, ill-advised, and delayed work on the new Main street bridge has at last been brought to a close, and traffic, which has been suspended all summer, is again permitted. It was found, when the bridge swung, that it was only about a foot too short to reach the new piers built out half way across the river. It was also discovered that the city could not appropriate adjoining real estate and dock property, so that while the bridge is permitted to swing, an unlooked for expenditure falls on the city in the form of recompense to dock-owners. Take this bridge work all through, it looks as if lunatics conceived it and shoe-blacks prepared the plans.

Work at the yards of the Cleveland Ship Building Company is still delayed on account of a lack of material. The keel for the new Bradley Line steamer is laid and some work is being done on the large freight monitor, but at least two hundred more men could be put to work if the iron and steel was sent forward from Pittsburg. The boiler shops and machinery departments are kept very busy and a large number of orders for stationary work are being executed.

The Cleveland Dry Dock Company, are now doing excellent work on the enlargement of their dry dock and it is about three-fourths completed, there is still a small leakage at the cofferdam, but it is expected that the gate will soon be in place, and all danger of another flooding obviated.

At the shipyard of the Globe Iron Works Co., the keels for the two new Buffalo-Duluth passenger steamers are well along and all possible advantage of the fine steady weather is being taken. Orders for material are being regularly and promptly filled so that no delay is at present experienced on that account. The handsome steel steam yacht Comanche, built to the order of Mr. H. M. Hanna, president of the company, is now nearly completed and will be ready for service in about a week, she is brigantine rigged, hull painted black with a gilt ribbon, which is according to the regulation style of fancy yacht tonnage. There is ample time for the yacht to reach the coast before ice makes in the canals or Gulf of St. Lawrence, yet no chances will be taken in this respect, and before the month expires the Comanche will be wending her way towards a port in South Carolina, where the owner and his family will embark for an eastern cruise during the winter months. Lots of honor and prestige will be reflected on this port throughout the cruise of the Comanche.

Plans are being prepared for a new Center St. bridge, and it is not a whit before time, although it is probable that no work will be done until navigation opens next spring. Before any such bungling work as was evidenced on the Main street bridge is entered upon it would be advisable to invite Capt. Harman, of Chicago, to visit the port and demonstrate his jack-knife invention for river bridges, Two of these are now spanning Chicago creek, and if I am rightly informed, there is no center abutment the size of a 3,000 ton steamer required to be fixed permanently in the bed of the river to work this bridge on. Barring the great viaduct, the only decent span there is on the Cuyahoga is the Lake Shore Railroad bridge at the mouth of the river. It swings to the side, and is clear of all river traffic. The stability of construction is all there too.

The following comparative table of ore receipts and coal shipments, according to the custom-house records, indicates the volume of district traffic in coal and ore. The figures relating to coal are net tons, and those of ore gross tons:

ORE RECEIPTS.

Port.	August, 1892.	August, 1891.	To Aug. 31, 1892.	To Aug. 31, 1891.
Cleveland.....	345,262	349,584	1,264,671	664,037
Ashtabula	503,259	400,036	1,009,998	973,070
Fairport.....	174,957	136,866	589,306	519,170
Lorain.....	34,862	45,931	188,271	182,882
Total.....	1,058,340	932,417	3,652,246	2,339,159

COAL SHIPMENTS.

Port.	August, 1892.	August, 1891.	To Aug. 31, 1892.	To Aug. 31, 1891.
Cleveland.....	171,583	143,768	762,383	626,523
Ashtabula	62,193	65,798	320,534	244,805
Fairport.....	13,350	4,169	55,321	48,945
Lorain.....	26,771	20,374	104,358	97,266
Total.....	273,897	234,109	1,242,596	1,017,539

The figures showing the coal shipments from Ashtabula are far from being authentic. According to the above table the total shipments of coal up to August 31st, 1893, were 320,534 tons, whereas the actual amount shipped was almost twice that. The cause of this discrepancy is the fact that nearly one-half the coal shipped from Ashtabula is taken by vessels that clear from Buffalo for some upper lake port. As they have through clearances, they are not obliged to report at Ashtabula, therefore their cargoes are not shown on the custom house books. In this way Buffalo gets the credit of shipping much coal that is taken from the intermediate port, and Ashtabula is justified in upholding her record of commerce.

THE CHICAGO MARINE BUDGTE.

Special Correspondence to The Marine Record.

CHICAGO, ILL.—The tug W. H. Wolf was damaged by fire in and around her engine room at 3 o'clock Saturday morning, to the extent of about $300. The members of her crew sleeping on board fortunately escaped without injury.

Captain Young, of the schooner Conneaut, on his arrival here, Tuesday morning, reported that a fore and aft schooner was ashore between Racine and Kenosha. When he passed her, the night before, he was too far away to make out the schooner's name.

The schooner Radical arrived here Tuesday morning, minus her foretopmast, which was carried away Monday night.

The Seamen's Union did not advance wages at this port, October 1st, to $3.25 per day, as stated in some Chicago newspapers last Saturday. The rate of wages at present is $2.50 per day.

The steamer Soo City, Captain Byron Armstrong, of the Vandalia line, between Chicago and St. Joseph, made her last trip of the season last Saturday, and has gone to South Chicago to lay up for the winter.

Elphicke & Co. have received advices that $550 worth of the corn cargo of the schooner John Burt, which went ashore near Oswego last week, had been saved. The salvage from the schooner amounted to $700 more. The Burt has become a total loss and has been abandoned.

All the Chicago tug companies have come to the conclusion after trying all kinds of smoke preventing devices for many years, that the only way to prevent smoke and abide by the city's ordinances is to use hard coal. It comes hard on them, as it costs more than double the price of soft coal and does not do as good work. But they have agreed to use it and save furthur trouble.

At Miller Bros.' ship-yard the steamers Ariel and Charm and tugs Watkins, Meteor, Tom Brown and Dalton were in dry dock for repairs and calking; the steamers Lawrence and Puritan for new wheels, the steamer Post Boy for a new wheel and repairs to her rudder, the steamer Mabel Bradshaw for some calking, the steamer John Otis for some repairs to stern bearing and drawing bearing, the tug George B. McClellan for some new stanchions, bulwarks and rail, part new wale strake, part new cabin, some new plank on her bottom and recalking.

A new fire boat for use at the World's Fair was launched at Miller Bros.' ship-yard Wednesday afternoon, September 28, and was named the Fire Queen. Her dimensions are 65 feet over all, 16 feet beam, 5 foot hold. Engine, high pressure, 8 by 8, built by C. F. Elmer, Chicago: boiler, 6 by 10, built by John Mohr & Son, Chicago.

Grain freights went up to 2½ cents on wheat to Buffalo on Monday.

J. H. Randall & Son, yacht and boat builders, are building a steam yacht of very handsome model, 60 feet over all, 8 feet beam, 4 feet depth of hold. She will be supplied with engine and boiler of large power.

The schooner Presto is stripping and will go into winter quarters at once.

George Warrington is building one of his patent water tube boilers, 2 by 3 feet, to be allowed 300 pounds steam pressure for the steam launch Pasatiempo, of the City of Mexico. The boiler he is building for the steam yacht Alcoyne is nearly completed and will be placed on board next week.

The steam yacht Buena took out the members of the Buena Park Yacht Club and many of their friends, Tuesday afternoon, for their last trip on Lake Michigan this season. The Buena will go into winter quarters at once.

Mr. McMyler, of Cleveland, was here this week inspecting the new derrick erected at the Independent Fuel Co.'s coal dock.

The following steamers' inspection certificates run out during the month of October in the Chicago district: Canal steamer Peerless, October 8; steamer Margaret Olville, October 12; fire boat Yosemite, October 12; tug Magnet, October 13; canal steamer Danube, October 15; fire boat Chicago, October 29.

Wm. McKittrick, Jr., superintendent engineer of the Buffalo & Niagara River Co., is in Chicago on business this week.

The Chicago, No. 3, E. M. B. A., have leased for two years a hall on the top floor of premises at the corner of Market and Lake streets, next door to George C. Finney & Co., ship-chandlers. The hall is 24 by 40, with two reception rooms adjoining. The hall and rooms will be renovated at once and fitted up and furnished newly for members' meetings by the close of navigation.

The excursion steamer Post Boy became disabled by the breaking of her rudder stock, off 35th street, Saturday afternoon at 3 o'clock, when returning from the World's Fair. There was a gale blowing from the northeast at the time, her anchors were let go and she brought up off 39th street. The steamer Adrienne went to her and succeeded in getting a line on board, but the line parted, and as there was a heavy sea, she gave up the attempt to rescue the Boy. Captain St. Peter and his life saving crew went to the steamer soon after she became disabled and got on board and made fast the lifeboat to her stern and remained on board, ready, in case of emergency, to take off the passengers and crew, until the tug Mollie Spencer went and rescued her and towed her into port at 11 o'clock Saturday night.

Collector of Customs John M. Clark has received an opinion from the solicitor of the treasury to the effect that pleasure yachts are exempt from the navigation laws compelling vessel owners to paint the name of their boat on the bows. The question came up in the case of Major Whitmore, owner of the New York yacht Lurline.

The schooner Homer is reported at Milwaukee, with part of her deck load of lumber gone, and the schooner Helen Pratt leaking badly.

The Squaw Island light-house, marking the most northerly point of the Beaver islands, in the north end of Lake Michigan, will be lighted for the first time next Monday. This was the light-house which the Board announced could not be operated until next spring, because no funds were available. Upon its completion, about two weeks ago, vessel-men appealed directly to Secretary Foster, who quickly found a way of cutting the red tape of the Board. WILLIAMS.

THE BUFFALO GRIST OF MARINE EVENTS.

Special Correspondence to The Marine Record.

BUFFALO, N. Y.—Negotiations for the sale of the Crystal Beach Company's steamer Pearl, were completed Tuesday, after a party of Chicago gentlemen had thoroughly inspected her. She passes into the hands of the World's Fair Transportation and Boat Company, of Chicago. The purchase price is said to be but little under $30.000.

Hingston & Wood's drill boat which sunk in Niagara river, has been towed into the Erie Basin and raised.

A novelty in the canal boat line was launched from the yard of G. W. Hall, at East Lockport last week. It will be a steamer driven by two overshot wheels. The projector expects great things in the way of speed.

The Seamen's Benevolent Association has moved from the foot of Main street to No. 59, the same street.

The captain of the steamer Onoko, still claims his last wheat cargo to be the largest ever carried on the lakes. He says the Gilcher ran short 60 bushels of the 113,885 she claimed, leaving the Onoko's the largest by about 20 bushels.

The manifest of the steamer F. Schlesinger on her last trip calls for 180,000 bushels of oats, which if so unloaded, will be by far the largest oats cargo ever floated on the lakes.

The union and non-union lumber-shovers had another serious fight on the Genesee Street docks the other day. Several non-union men were injured and President McGovern of the union was arrested on a charge of rioting.

Buffalo's grain trade for September was very large, the receipts, including 800,000 bushels of flaxseed, or a total of over 20,000,000 bushels besides over 1,300,000 barrels of flour. Coal shipments were 377,000 tons.

The steamer Pillsbury got aground in the harbor last Friday, for a short time.

Capt. W. Young of the steamer Pabst took tugs out on his last trip and didn't get aground. Twice before, this season he has grounded and been delayed by not being towed out.

Engineer Tim Higgins of the tug Maytham, has plenty of nerve, and showed it Tuesday, when Governor Flower and a party of canal officials came down to the docks to board the state yacht Racquette for the annual tour of inspection along the canal to Albany. As His Excellency stepped from the carriage, he bowed to the people assembled, but a bow was not enough for Timothy, he stuck out his hand, grasped that of Mr. Flower as though he had just got two bells and the jinglers, saying at the same time: "How d' do, Guvnor; how's Grover?" "He's all right," responded Mr. Flower, with a broad smile, returning the grasp. Tim says he is surely going to vote the Democratic ticket this fall.

Coal freights to Lake Michigan jumped to 60 cents for for Milwaukee and 65 cents for Chicago last week, and the demand for boats at the advance continues very fair. Duluth rates are 25 cents with not a great deal of tonnage offering, vessels preferring to go light rather than load at such a low figure.

The steamer Arctic which was only last spring sold by the Penokee Lumber Company to the Hollister Transportation Company of Tonawanda, has changed hands again, the latter firm having transferred her to Marinette parties at a figure said to approach $12,000.

Hurd & Hauenstein who have been figuring with Buffalo parties for the construction of a steambarge, have decided to let the contract to an outside firm. The vessel will be built near Detroit, though by whom, Mr. Hurd refuses at present to state. She is to be of wood, 180 feet keel, 35 feet beam and 13 feet deep. Her engines will be fore and aft compound cylinders of 22 and 44 inches diameters with 38 inch stroke.

Second mate Lane of the steamer Emily P. Weed skipped to Canada when the vessel reached here on her last trip. Immigration Inspector DeBarry was after him, it being ascertained that he was an alien.

Capt. McGougan of the schooner Atmosphere, is slowly recovering from injuries received during a recent blow on Lake Erie, when he was caught in the halliards and dropped ten feet on to the deck of his vessel, striking on his head. The Atmosphere was rather badly squeezed by a big steamer while waiting for cargo here.

Capt. Niland resumed command of the Northern Wave last week.

The handsome new steamer C. F. Bielman arrived at this port since the last issue of THE RECORD, for the first time. She is of the Wheeler model and almost a duplicate of the Uganda. She was launched August 13, and is 309 feet over all with 41½ feet beam, and is propelled by a triple expansion engine of 1,200 horse power. The cylinders are 20, 32 and 54 inches respectively, with 42 inch stroke, fitted with Kendall's piston packing rings, a new feature. A. E. Stewart of Detroit is the captain and part owner of the vessel. The boat is named in honor of C. F. Bielman of Detroit, one of the owners. She is said to be one of the finest fitted steamers on the lakes. Her cargo on the down trip was 75,000 bushels of wheat, and she loaded coal here for Duluth.

Hubbell & Co. of this city are negotiating with Rieboldt, Wolter & Co., the Sheboygan shipbuilders; for a steamer 15 feet longer and with one foot more beam, than the E. A. Shores, Jr. She will carry about 850,000 feet of lumber, and is intended to ply between Ashland and Buffalo. The contract will probably be signed within a very short time. Rieboldt, Wolter & Co. have turned out some of the finest steam lumber carriers on the lakes.

Two steel steamers counterparts of the S. C. Reynolds, are to be constructed by the Craig Shipbuilding Company to the order of the Lake Erie Transportation Company, doing business between here and Toledo.

Senator Frye, who is Chairman of the Appropriations Committee of the Senate, made a careful inspection of the harbor and breakwater on Wednesday, in company with Collector Morgan, J. N. Scatcherd, George Urban, Capt. M. M. Drake, Major Reffner, United States Engineer in charge of works, William Thurstone, secretary of the Merchants' Exchange, C. H. Keep, secretary of the Lake Carriers' Association, and Messrs. Newman Roberts, Parsons and Ash. The Senator expressed himself as astonished at the evidences of Buffalo's enterprise and at the magnitude of her shipping and terminal facilities. He showed much satisfaction at the work already done by the city and private persons in dredging and deepening the local channels. Next summer the Senator intends to take a trip along the entire course of the waterway between Duluth and Oswego.

FREIGHTS, SHIPMENTS AND PROSPECTS AT THE HEAD OF LAKE NAVIGATION.

Special Correspondence to The Marine Record.

DULUTH MINN.—The feature in vessel business as in the lumber trade the past week has been the unusual and somewhat unexpected advance in freight rates which are now an even dollar higher than they were in August. They have now gone up to $3.25 to Buffalo and Tonawnda and $3.50 strong to Chicago. As a consequence there are very large shipments of boards and timber that will not be made from this place this fall.

One eastern concern alone has on docks in the city over 6,000,000 feet that it will leave here till spring, as the increased freight on the consignment would cut out $3,000 of profit that the buyers had figured on making. Still the year's shipments will foot up at least 55,000,000 feet, which will be distributed about as hereafter specified. Mitchell & McClure will ship nearly 30,000,000, Bradley & Hanford 7,000,000, Duncan Brewer & Co. 5,000,000, the Cranberry Co. 6,000,000, the Howe Co. 2,000,000, and the Rust-Owen Co. the balance. Had it not been for this advance in rates the total shipments would have been at least 75,000,000 feet and probably considerably more than that. The local and western demand is so great that the sawmill men are not much discommoded by the advance except in cases where they have sold stuff and cannot get it moved forward. Some of the lumber companies here are thinking seriously of following the example of the Shores Lumber Co. of Ashland and buying a fleet of lumber carriers. The shipments of timber and boards from the head of the lake next year will foot up at least 100,000,000 feet and there will need to be considerable transportation facilities.

The report of the board of trade shows that the shipments of wheat for last week were 1,023,000 bu. while receipts were 1,950,000 bu. The total stock in store is now 3,154,000 bu. as against a total of 1,561,000 bu. a year ago. This is an increase this year of 927,129 bu. and last year of 358,000 for the week. This movement is considered excellent, when the great size of the crop last year and the high price at harvest time is taken into consideration. Cars on track this a. m. were 861, and the average load per car is at least 600 bushels. Wheat rates are now strong at 3½ cents, and will undoubtedly advance, especially as ore freights are on a higher basis than that. There is not much room chartered ahead, but all the vessels that are to be had are readily taken at the going rate. This week's flour statement will show a big business, and all the mills are as busy as they can be. The Imperial, Freeman and Duluth Roller Saturday ground together 9,600 bushels, of which the Imperial turned out over 7,000, the biggest output ever made by any mill in the world.

Total ore shipments from the ore docks at Two Harbors to date aggregate fully 1,000,000 tons and contracts have been made that call for the additional movement of 175,000 tons in October. Total shipments of the year, therefore, will easily reach the million and a quarter mark and may pass it. The Zenith mine has shipped half the 20,000 tons that it has sold for this year's delivery and may not send forward much more, while the prospects are that the Mesaba mines will not be in the market at all; as has several times been stated in this correspondence the D. & W. R. R. ore docks will not be able to ship a pound of ore before next season, and the D. & I. R. Ry. will not have its line into the Cincinnati and Biwabic mines in operation before November. Two large mines on the Vermillion will be added to the list of shippers next, and this number may be made three. The Pioneer at Ely has made a contract to put down a 4-compartment shaft 800 feet to the Chandler ore body, and work has already begun. It will mine ore above that level, but intends to get the shaft clear down at once. The Pioneer will be a shipper of at least 100,000 tons in 1893. The Miller & Brown property, on Section 26, just east of Ely, has been leased to that extensive mining syndicate, the Minnesota Iron Company, and will also be a heavy shipper next season. The Armstrong mine, on Armstrong lake, between Tower and Ely, will also be operated, but to what extent I do not know. Thus the shipments of the Vermilion will grow largely, in addition to what the Mesaba can do. On the latter range the Cincinnati mine, which is to be operated by underground workings and back-stoppings, is already getting out a stock-pile, and is raising a little ore every day. The Monntain Iron has not yet begun the use of its steam shovel in getting out ore, but will do so as soon as the road is in condition to ship. The same is true of the Biwabic, which is also to be operated by surface mining.

Work on the passenger whaleback goes along steadily at the Steel Barge Works, and the two barges for the flour trade will be out in a short time. The Neshoto is still in dry dock, but her repairs are getting along as well as could be expected, and she will soon be out.

Many favorable comments are heard at this end of the lakes on the enterprise exhibited by THE MARINE RECORD in illustrating the new dry dock as soon as the first vessel was docked and the immense "hole in the ground" had been pumped out for the first time after its completion.

D. E. W.

THE CHICAGO YACHTING ASSOCIATION.

CHICAGO, ILLS.—About one hundred yachtsmen met at the Sherman House club-rooms last Friday night and organized the Chicago Yachting Association.

The following resolutions were unanimously adopted:

"WHEREAS, An association of all persons interested in aquatic sports is deemed advisable for the purpose of bettering the facilities in Chicago for such sport; be it

"*Resolved*, That an association be formed to be called the Chicago Yachting and Boating Association. That all persons interested in such sports for pleasure be invited to become members and that an initiation fee of $2 be paid by all members, and annual dues be not less than $6 a year, payable quarterly. That the object of the said association be to provide suitable facilities for said sport, and to forward, foster and protect the interests of all members of the said association."

The following members were enrolled: M. D. Wilber, W. A. Paulsen, W. G. Clark, F. D. Simmons, George Warrington, E. P. Jacquith, C. G. Norton, W. H. V. Rosing, H. E. C. Heinneman, P. D. Dutton, J. H. Randle, D. G. De La Fontaine, C. C. Andrews, Arthur R. Clark, J. D. Dunham, F. H. Ray, Thomas Boyle, Oliver Sollitt, F. J. Daggert, W. D. Payne, John George, Allison V. Armour.

Committees were named as follows:

By-Laws and Constitution.—Commodore W. R. V. Rosing, E. P. Warner, Frank Morris, M. D. Wilbur.

Harbor Facilities.—Capt. James Dunham, Charles Norton, Col. Robert Rae, Capt. John Prindiville, Frank H. Ray, F. H. Watress.

Winter Quarters.—George Warrington, W. A. Paulsen, F. O. Heilman.

Club-Rooms.—H. J. Carr, E. P. Jacquith, Wallace Clark.

NEW SCHEDULE OF WAGES.

The Finance Committee of the Lake Carriers' Association held a special meeting on Wednesday and authorized a new schedule of monthly wages to take effect October 6th, 1892. The complete card as adopted is as follows:

FIRST CLASS.

Metal steamers having water bottoms and triple expansion engines: Chief Engineer, $115 to $125; second engineer, $75 to $80; per month for season.

SECOND CLASS.

Metal steamers not included in Class 1, and wooden vessels with triple expansion and with compound engines, except the smaller boats, which may be put in Class 3: Chief engineer, $100 to $115; second engineer, $70 to $75; per month for season.

THIRD CLASS.

Smaller boats with high pressure or low pressure engines, or with compound engines, covering all boats not included in the two former classes: Chief engineer, $80 to $100; second engineer, $60 to $70: first mates, $60 to $80; second mates, $45 to $60; cooks, $45 to $55; per month for season.

NEW RATE PER MONTH.

Helpers, $15 to $20; firemen, $40 to $45; wheelsmen, $40 to $45; lookout, $40 to $45; deck hands, $20 to $25; oilers (when carried), $40 to $45; firemen—fitting out and laying up, $1.50 per day and board themselves.

ON CONSORTS AND SAIL.

First mates, $50 to $65; second mates, $40 to $50; cooks, $35 to $45; seamen, $35 to $45; boys, $20 to $30.

FLOTSAM, JETSAM AND LIGAN.

The steamer Ogemaw, which foundered in sixty feet of water between Burnt Bluff and Fayette, Big Bay DeNoque, has been brought to the surface by the McMoran wrecking expedition.

The rigging, anchors and sails of the schooner Mary B. Hale, which went ashore Sunday, have been sold at Manitowoc for $325. This indicates a total loss and abandonment of all concerned.

The two tug lines consolidated at Toledo last spring formed a monopoly. They have had things pretty well their own way until last week, when the tugs Tuthill, Moore and Farragut started an opposition line.

Capt. W. T. Garden, of the steamer Rochester, has been ordered by Chicago physicians to retire from his duties and receive medical attention for a severe throat affection, which is considered very serious. His successor will be appointed from the Union line.

LOCAL PILOTS MAY BE ENGAGED.

For the past decade the pilots of the United States have had a grievance against the Navy Department. Early in 1881 Secretary Hunt issued regulations restricting the use of pilots on naval vessels to extraordinary cases and naval officers have been taken to task so many times for employing pilots that a commanding officer rarely if ever, nowadays engages the service of a pilot without first securing special permission from the Secretary of the Navy. In many instances, they will take the most hazardous risks rather than ask for a pilot for fear that the request will be refused or that their reputation as navigators will be injured in the estimation of the authorities. The Pilots' Association of New York, is considered to have won a signal victory in the issuance of the following order:

NAVY DEPARTMENT, WASHINGTON, Sept. 27, 1892.
GENERAL ORDER No. 400.
Employment of Pilots.

All existing orders and regulations restricting the employment of pilots by commanding officers of vessels of war are hereby revoked. Commanding officers will employ pilots whenever in their judgment such employment is necessary.

B. F. TRACY,
Secretary of the Navy.

This will be cheerful news to pilots in all maritime cities, and especially in New York and the east, where naval vessels are constantly moving in and out of dangerous places. It means considerable additional employment for them.

Naval officers will also be pleased with the Secretary's new order. They are now permitted to use their own jndgment as to occasions when pilots are necessary.

While pride of profession may induce some commanders to navigate their own ships in and out of dangerous harbors, the majority will doubtless be only too glad to escape the responsibility for accidents which are liable to happen even with expert pilots aboard.

SUBMARINE EARTHQUAKES.

The directories or guides of the several oceans, and other works published expressly for the use of shipmasters, abound with instances of well-defined and authentic accounts of submarine earth-quakes having been experienced while at sea, notably in the torrid zone.

Novelists are pleased to sink or create an island especially in the South seas at the most opportune time for their yarn to spin out well.

Of late years, however, there has not been the experiences recorded which earlier navigators were prone to meet with, though now the same characteristics recorded of other submarine shocks is found well away in the North Pacific. It appears that the schooner Dora Sieward, H. S. Sieward, master, while on a voyage from Copper Harbor to Seattle, Wash., in a position north of Athka Island, was suddenly lifted as if a whale had struck her keel. Falling again into the trough of the sea she experienced a succession of shocks which cast everything loose about the decks, the men being unable to keep their footing. The weather was clear, and the surface of the sea betrayed no evidence of the subaqueous eruption which was taking place. The vessel sped along on her course for fully a minute, and when she had covered 500 yards, and after being shaken from stem to stern, the eruption ceased. The mate at the wheel said the spokes appeared to be so many electric batteries from which strong shocks tingled through his body till he could hardly keep his position.

There can be no doubt of the authenticity of the foregoing, although some of the similar events recorded by early navigators were no doubt due to their vessels grating over coral reefs and other submarine obstructions not plotted on the charts, on account of undeveloped surveys, or in latitudes where the bottom had never been surveyed at all.

MODELS OF CHINESE VESSELS.

Models of Chinese junks and vessels of various types have been shipped to Chicago by Edwin Bedloe, United States Consul at Amoy, China. These boats comprise almost all varieties, both ancient and modern, known to that country. As the Chinese have entirely different ideas of ship-building from the other nations of the world, this exhibit will be strikingly novel. The originals have been carefully followed, all of the peculiarities of the strange crafts of the Mongolians being faithfully produced. The boats are gaudily painted and decorated with huge eyes on either side of the bow, which, according to the maritime superstitions of the country, enable the boats to see. There are eighteen boats coming, including specimens of the sanpan, or small row-boat used in Central China, and the sanpan of Amoy and Formosa, used on the sea coast. Tokian fishing boats; tek-pai, a bamboo passenger raft used in heavy surf; fishing raft, also used in surf. Passenger junk of Chian-Chin. Junk of Tong Wah, which are the fastest boats in Chinese waters. Mandarin war junk, freight junk of North China; water boat, from which steamers are supplied with fresh water; missionary and Mandarin house boats, Mandarin revenue cruiser, several different kinds of rafts, and other curious craft.

MISSIONARY SERVICE AFLOAT.

An interesting form of religious work is that which has been carried on by Madison Edwards and his steam launch Helen May in Vineyard Sound and its vicinity. For some years Mr. Edwards has steamed about in his boat visiting each year about 1,100 vessels, and throwing aboard each bundles of good reading matter. He has been under regular commission from the Boston Seamen's Friend Society, and, besides the work described, has been in many other ways the sailor's friend. Recently a new missionary steam launch for Mr. Edwards's use was launched—a second Helen May. This launch, which has been made possible by gifts of friends, is 33 feet long, 7½ feet beam, and 3 feet 9 inches deep. Besides steam power, she is rigged to carry sail when desired. The boat was dedicated with religious and musical exercises. A gospel barge, the gift of a wealthy New Yorker to Bishop Walker of the Episcopal Church of North Dakota, is to be launched at Bismarck soon. She is to be called the Missouri Missioner and used for Christian work in towns and camps along the Missouri for a distance of more than 500 miles.

THE DOMINION ESTABLISHES TIDAL GAUGES.

Officers of the Marine Department, under the superintendence of Mr. C. Carpmael, director of the meteorological service of Canada, are at present engaged in placing the tidal gauges at different points in the maritime provinces. The objects of tidal observations are two: First, to make it possible to predict the time and height of high and low water on any day and at any time; second, to connect therewith observations of tidal currents. It is this second object which has recently mostly attracted the attention of those interested in shipping within the Dominion. Many ships have run ashore and been wrecked in the darkness, when the officers had supposed themselves far from shore. It has been improperly assumed that tidal currents are always connected with the direction and force of the wind, and defy prediction. While this is true of surface currents, there is reason to suppose that by far the greater part of these irregularities are truly tidal, and their laws may be ascertained by a proper system of observation. A tidal observation station will be established at several prominent positions on the coast line. Sir William Thompson's self-recording machanism will be used, as well as eye observation gauges specially designed by Mr. Carpmael. Meteorological observations will also be made in connection with the service.

STILL HOLDING HER RECORD.

On the last trip up to Duluth, Capt. Zealand, of the E. C. Pope, is quoted by the *Duluth Daily News* as saying: "The Canadian Pacific railway steamer Alberta has been laying for us all the season, and we got together this trip up. We locked at the Soo together and we beat her to White Fish Point by thirteen minutes. A few weeks ago we wiped out the Manitoba, and the Canadian Pacific people have been bragging ever since, that, as the Alberta could run a mile an hour faster than her, that the Pope would not be in it. You say the Gilbert is anxious to meet us? Well, we've passed her twice, and are ready to give her a whirl any time. The Pope's time from the Soo was just twenty-eight hours, and half the time she was working under check on account of the heavy sea. The Gilbert's best time was thirty hours. The Pope has met and passed all the fast boats on the lakes now but the Weed and the Chemung." The machinery and the men who drive it are justly entitled to a full credit for this handsome showing. The E. C. Pope is skillfully handled and holds her record bravely, but she don't want to lay herself alongside of the Owego or boats of that ilk.

AN INNOVATION IN IRON AND STEEL SHIP-BUILDING.

That the old way is not always the best, is evidenced from the following, which we find under "Ship-building Notes" in the columns of our London contemporary, *Fairplay*:

"Ship-builders are, for the most part, a somewhat conservative class, not given to rushing headlong into new departures. Any innovation on ordinary practice is usually very wisely received in a most cautious and critical spirit; so when, about eight or nine years ago, certain ship-builders on the north-east coast boldly left the beaten track and adopted overlapped butts on the shell instead of the ordinary edge and edge flush butt and buttstrap, many ship-builders and ship-owners looked on with feelings of horror and disgust. Experience has, however, shown that the overlapped joint, though less sightly than the flush butt, is much stronger and more efficient, this being more especially the case in oil-carrying vessels and in very large steamers. Builder after builder and owner after owner have gradually set their prejudices aside and adopted the new style, until we find even the Cunard monster, the *Campania*, built with the greater part of her shell fitted on this principle. Within the last year or two an improved form of the overlapped joint has been introduced by Mr. Wilson, of the firm of Harland & Wolff, Limited, Belfast. By this method the shell plates are scarphed at the corners for the width of the seam, thus dispensing with the objectionable tapered packing in the seams at the overlaps, and it forms a much fairer and more sightly seam, and surface offering less frictional resistance. This system is being extensively adopted in passenger and cargo boats and in oil steamers, for the latter of which it appears to possess special avantages."

NOTES.

All the great naval powers and many of the smaller ones to whom invitations were sent by the State Department to participate in the naval display at New York next April have accepted the invitation and have signified their intention to send some of their latest constructed vessels to take part in the exercises.

The American Ship Windlass Co., of Providence, R. I., have now in full operation the addition to their works, and although their improved facilities greatly enlarge their capacity for turning out work, they are still as crowded with orders as ever.

The schooner Oulina has arrived at Boston from Labrador with a colony of Esquimaux for the World's Fair. The colony consists of twelve families, comprising fifty seven souls, ranging in age from six months to fifty-six years. They have all their paraphernalia with them, including 24 dogs.

Captains Samuels and Norton, of the *Marine Journal*, will have the iron steamboat Perseus in the naval parade, to take place at New York, October 11, for the accommodation of about 500 guests who may desire to take part in and witness the great naval pageant and marine display. The boat's capacity is about 1,200; the tickets will be limited to 500.

The South Brooklyn Steam Engine Works have recently improved their facilities, so that they are prepared to furnish condensers at short notice, of the best workmanship, for marine and stationary engines. They have recently secured the services of an engineer who has had experience in modern steamships, who will attend to the details of the condenser work, and will undertake their adjustment, if desired by patrons.—*The Engineer.*

Capt. Alex McDougall is out with a card challenging stability of construction and offering $1,000 even odds in proving the whalebacks the staunchest vessel. A rather libelous article published in a daily paper from an interview with a stockholder in a competitive shipyard is the cause of the stand which Capt. McDougall has taken in this direction. It is suggested that competent and disinterested naval architects be named as the adjudicators. The word is now, without intending to be slangy, "put up or shut up."

There is considerable rivalry between THE MARINE RECORD and *Seaboard* to see which can present the most striking features to their readers. The last issue of THE RECORD says: "We have scarcely had time to receive the congratulations of our friends before along comes *Seaboard* under the same press of canvas (or paper) and gives us a close hug to the weather shore, so that now we have to lighten the forms by throwing overboard even our column rules in an attempt to make another dash to windward."—*The Detroit Evening News.*

Messrs. Harland & Wolff have been commissioned by the White Star Line to build a large new transatlantic steamer for them. She is to be called the Gigantic, and is to beat the record. She will be 700 feet long by 65 feet 7½ inches beam, of 45,000 horse-power, and to steam 22 knots from port to port. It is rumored that the boat will attain a maximum speed of 27 knots, and cross the Atlantic in 4½ days. She will have three screws; two of them will be fitted similar to those on the Majestic; the third screw will be central and similar in position to the single screw on board an ordinary steamer. The Gigantic will not be commenced till next year, and it is expected that she will be ready for sea in April, 1894.

The vessel owners of the Great Lakes will score a great triumph when they secure the reinstatement of Col. Ludlow at the head of the lighthouse board at Detroit. He and Commander Hyerman were both knocked out by the Poe influence because they followed the wishes of the vesselmen in lighting St. Mary's River. After a hard fight before Secretary Foster, Col. Ludlow was determined by him to be in the right and Col. Poe decidedly in the wrong. Col. Poe should now resign.—*Inland Ocean*, Superior, Wis. The foregoing is all wrong in so far as it relates to Col. O. M. Poe, as we have it on the very best authority that Col. Ludlow has a warm friend and supporter in the person of Col. O. M. Poe, furthermore, the contention at present existing is between the Washington officials and the suspended officers and not as our contemporary seems to suggest. —ED.

LIFE SAVING EXHIBIT.

The life saving service will be represented at the World's Columbian exposition at Chicago by a life saving station and apparatus that will show completely and to perfection this humane feature of the work of the federal government. The most essential feature of the exhibit—the station itself—is rapidly nearing completion on the lake front within the space to be dedicated to the exposition. This station will be fully equipped with all the apparatus and paraphernalia belonging to a first class life saving station, and besides the articles used in work on the Great Lakes it will have on exhibition boats of the styles used on the Atlantic and Pacific sea coasts and on the falls of the Ohio at Louisville, with such other apparatus as is peculiar to the work in any part of the United States.

For instance at Louisville two life skiffs and seven reels are used, this apparatus being in use nowhere else. The station will be manned by one of the regular life saving crews who will perform a daily drill, whereby the visitor who has never seen a life saving station before, or the life savers at work, may obtain a fair conception of the duties that are performed by them, and it may be that some of the visitors will have an opportunity to observe the work as it is actually in storms, for the site of the life saving station is erected on one of the most dangerous parts of the coast in the vicinity of Chicago, and the station apparatus and crew are there not only for exhibition but for business whenever any vessel needs assistance.

The station is to be a permanent one and when the exposition is nothing but a memory the life saving station is expected to remain in its present location. The government was not able to secure a satisfactory and permanent title to the site of the present Chicago life saving station, and in the last sundry civil appropriation bill congress inserted a proviso that a new station should be erected within the grounds set apart for the World's fair on condition, however, that there must first be ceded to the United States the title to the site selected. It is intended to make the new station a model one. As stated, it will contain all the appliances now used in the work of life saving in any part of the United States. The bureau obtained a gold medal for its exhibit at the fish and fisheries exhibition where it simply showed its apparatus and did not attempt to portray its mode of operation. It will do more than this at Chicago and Superintendent Kimball is willing to put our system to a competitive test with that used in any other country. The medals and awards received will be placed on exhibition and also some apparatus showing the progress of life saving invention. Side by side will be shown a modern Lyle gun for throwing a succoring line to the crew of a distressed steamer and the old style mortar which was used when this method of saving line was first adopted. The bureau has in its possession the first mortar and the first ball ever used in America in life saving work. The relic has quite a history. About thirty years ago it was used to throw a line to the crew of the British ship Ayrshire, in danger off Squan Reach, N. J. The ball fortunately struck the deck and carried the line to the passengers and crew. By means of the life line 201 persons were rescued out of a total of 202 aboard. The ship sank and the ball used went to the bottom. About twenty years afterwards, through the working of the waves, the ball was brought to view again and sent to the life saving bureau.

CANADIAN ENTERPRISE.

Canadian builders of steel vessels are soon to be invited by Thomas Marks & Co., of Port Arthur, on the north shore of Lake Superior, to submit bids for the construction of a steamer of the same general dimensions as the Algonquin. The new craft is to have a whaleback deck and stern, and the ordinary steamer bow. Mr. Marks says a steel or iron vessel can be built much cheaper on the Clyde than at any point along the lakes, for the reason that material and labor are much cheaper, but adds that the great expense and trouble of getting a boat through the canals of the St. Lawrence is all that prevents him from going to the Clyde for the new boat. He will have the work done in Canada because material is so much cheaper there than on the American side. Mr. Marks might also have added that a spice of the spirit of patriotism might be found to exist in the placing of the contract on the Canada side of the lakes.

INLAND LLOYDS SUPPLEMENT.

The September supplement issued by Capt. McLeod, manager of Inland Lloyds, contains besides several rerated vessels, the names of two new propellers, Seattle, 331 net tons, built by H. Still, Oscoda, Mich., for his own account and valued at $30,000, class B. I. The Columbia, 73 net tons, built by Robertson of Grand Haven, Mich., to the order of Rudoc and others of Frankfort, Mich., valued at $7.500 and classed A. I.

FAMILIAR LAKE SCENES.

The irrepressible Kodak gets in its work this time at the thriving lake port of Huron, O., a port which has had the attention of the officers in charge of the river and harbor improvements for the past 66 years, at which time the mouth of the river was closed by a sand bar, but in 1891 a depth of from fifteen to seventeen feet could be taken into the port. The piers at Huron, as shown in the illustration, are on the same plan as those at all lake ports, being low wooden structures of varying lengths, filled in with rocks, portions of which are partly repaired more or less each year, if the appropriation hold out, otherwise, they, the repairs, stand over, and, in this connection, it is high time that the United

OFF THE PORT.

States embarked on a more sightly and permanent system of constructing piers than has hitherto obtained. A pile driver projection was all good enough at a woodlanding or a rice plantation along the banks of a Southern river half a century ago, bu. such temporary improvement is not worthy of the country to-day, and reflects no credit on the able and efficient corps of officers in charge of the harbors; besides, the incessant natural decay, coupled with an occasional storm, makes the keep-up of these indifferent wooden jetties more expensive to the country at large than the total cost of a sightly, permanent construction of concrete.

The vessels shown in the cuts represent two important lines recently established at the port of Huron, the

ENTERING THE HARBOR.

Wilson Transit Line, and the American Steel Barge Co., and steamers of either fleet may be found at almost any time during the season of navigation handling cargo at this port. The volume of commerce for 1891 showed the arrival of 281 vessels of an aggregate capacity of 37,901 tons and clearances of 281 vessels of 35,563 tons, the largest cargo entered or cleared up to last year was 2,800 tons, and the deepest draft 15½ ft. Although it is considered that Huron is one of the best natural harbors on Lake Erie, its resources have not yet been developed, but the outlook is more favorable now than ever before, and there is every indication that in a few years hence Huron will be one of the briskest ports on Lake Erie.

AT THE DOCK.

The truly opposite types of steamers represented in the first cut would argue that the tonnage was constructed either for an entirely different class of trade, or that the factor of load line had been departed from to the greatest limit. Both types, however, embody a high efficiency, and are found economical freight carriers in the lake trade.

The second cut shows the form of piers built by the United States government at all lake ports. Their usual width is from 150 to 250 feet, built of white pine, and subject to more than ordinary decay through exposure.

Cut No. 3 shows a whaleback after discharging her cargo and all ready to proceed on the lake again.

WORKING A DIFFERENT WAY.

When the President issued the proclamation with reference to the payment of tolls on Canadian shipments by vessels at the Soo canal, the Dominion vessel-owners no doubt expected to find little or no freight to carry at the additional rate which the toll would require them to exact. Columns were written to show that the boat lines aforesaid were earning a precarious livelihood which was to be obtained only during the season of navigation and could scarcely afford to pay the amounts to be exacted under the law. It is interesting to note, therefore, that there is an entirely new phase to the situation, and that the lines are not paying a cent of the tolls.

When the proclamation went into effect the boats for a time yielded up the 20 cents a ton on goods destined for Canadian points, but the Canadian Pacific soon changed that. It notified all the lines on the lakes that it would pay all the tolls on goods delivered to it at Port Arthur, on the north shore, hoping by that means to euchre the Northern Pacific and Great Northern out of their share of the business. When a knowledge of this proposition, which was hastily accepted by the boat lines, reached the Northern Pacific people, they immediately made a similar offer, with the result that the two railways are standing all the tolls, which are beginning to amount to something in the aggregate. This double action method seems to work like the proverbial school-master's rule—both ways, and not only the way it was intended.

FREE NAUTICAL SCHOOLS FOR PROFESSIONAL EDUCATION.

Mr. E. C. O'Brien, United States Commissioner of Navigation, is busily engaged in the preparation of his annual report, which bids fair to be a valuable and interesting document. It is learned that he will recommend the establishment of nautical schools for the better scientific education of the men employed in the merchant marine on the Atlantic coast and on the Great Lakes. Two floating schools, one to be on the Great Lakes and one on the Atlantic seaboard, will be recommended; also a school on shore. These schools are to be maintained at Government expense, and three months courses are to be established free of all expense to those who attend. The courses will consist of highly scientific instruction to masters and mates of vessels of the merchant marine. On the floating schools scientific principles will be applied to practical navigation. Mr. O'Brien is quite enthusiastic in his project, as he says that with the development of the merchant marine there will be opened up almost an entirely new field for American talent.

THE ENGINEER'S EPITOME.

The caption is the title of a small volume issued by the Mason Regulator Co., Boston, Mass., October 1st, 1892. The publishers state that "nearly two years ago we bought the edition of a book on Engineering which, until that time, had had a limited circulation. It was an excellent work, and we thought ought to be in the hands of every engineer. As such works ordinarily are sold at high prices, we placed this on the market and advertised it for sale at a price which would only cover the cost of the book and the expense of handling it. The sale at once exceeded our expectation, and a second edition was published. We then bought an edition of another book of interest to engineers, which also met with a large sale. The present work is from the pen of N. J. Smith, of Hartford, Conn., an engineer of over thirty years' experience. It has cost somewhat more to publish, owing to the mathematical work contained therein; but we trust will be found to be of sufficient value to the engineer to warrant the increase in price."

Quoting from the index of the work we find the following subjects treated upon, fractions, powers and roots, properties of steam, temperature and vacuum, volume, weight and velocity of steam, boilers, chimneys, h. p. of engines, thrust on propeller, condensers, slide valves, belts, governors, etc.

There are 135 pages of a 6 by 4 inch book, ably compiled, that can be placed in the hands of engineers for the nominal sum of fifty cents, and to all those who are determined to excel in their profession of steam engineering, we should say "get it."

AN EQUITABLE BASIS OF VALUATION.

Capt. Alex McDougall, general manager of the American Steel Barge Co., W. Superior, Wis., makes a suggestion anent the coming change in assessing the valuation of lake vessel property by the marine insurance companies, that has the merit of justice at least.

Heretofore the underwriters have employed one man to fix the valuations. The captain suggests that two or three vessel owners and as many representatives of the underwriters be appointed to perform this work—thus giving each party an equal show. The under writers themselves have tired of the one-man plan.

The Marine Record,

ESTABLISHED 1878.

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VESSELMEN will be well pleased at the action of the Light-House Board in appropriating funds for the maintenance of a light on Squaw Island during the remainder of the season. A few weeks ago it was thought that this dangerous location would have to go unmarked for another season, notwithstanding the fact that the light-house was completed and ready to be illuminated. On a re-consideration of "ways and means," the Board evidently found a method of granting the request of the Lake Carriers' Association for a light at Squaw Island this fall, and early next week another beacon "to light the seaman on his way" will be established at that point. The Board are also to be congratulated on the explanatory additions made in the usual "Notices to Mariners" regarding bearings and distances.

THE system of insuring modern lake-built vessels according to an arbitrary valuation based chiefly upon a guess and a notion, with a liberal assumption of their earning capabilities during the period when the assessment is made, is, perhaps, open to criticism. Why should not underwriters accept the class and rating which the tonnage holds under a duly recorded, qualified, and disinterested survey, rather than inflict a moral injustice upon owners to the tune of thirty per cent., viz.: twenty under, or ten over a partly imaginary intrinsic value. A certain tonnage, under a positive class, is groundwork enough for insurance valuations, irrespective of the annual fluctuations of the freight market. Given a close hard freight season, and a majority of the present assessed values would take a tumble like "the fall of Babylon."

A MORE liberal use of tidal guages should be adopted on the lakes, and their readiugs systematized, so that the periodical fluctuations might be brought within the bounds of comprehension. Mark W. Harrington, chief of the Weather Bureau, Department of Agriculture, has done more in this direction for the lakes than has ever been attempted before, and, as it is widely acknowledged that atmospheric causes enter largely into the aparent eccentricities of the surface movements, barometrical readings, and tidal guages ought to be invaluable agents in determining the at present, meteorological phenomena and physical geopraphy of the lakes. River surfaces are well guaged, why not the lakes? Existing levels might also be known daily, and not "kept under the hat," as they are now, at a few stations in operation for strictly departmental uses and service only.

ALTHOUGH no advance proof sheets of the annual report of the Commissioner of Navigation has yet been given out for publication, it is learned that he will strongly endorse the establishing of schools for instruction in the higher branches of nautical education. Three months' courses are to be furnished gratuitously to all applicants and scientific attainments will probably be inculcated by naval instructors. This is a step in the right direction, and being embodied in the Commissioner's report, it no doubt has the endorsement of the Secretary of the Treasury, and possibly also of President Harrison. So little has been done in the past years for the merchant marine of the United States that it is simply refreshing to learn of any movement emanating from the government looking towards a rehabilitation of the Service, and this educational course in science, engineering and navigation is a highly commendable departure.

IF a nautical college in the form of a school ship is placed on the lakes by the United States Government, according to the recommendations of the Hon. E. C. O'Brien, Commissioner of Navigation, every facility should be given those desiring of proving their superior qualifications, in obtaining the honors of the service. The steamboat inspectors who are now the licensing body for all waters, are wedged around with too many grades of licenses, and it seems to us that the technical and moral discretion of the zealous examiner must be frequently stretched to distraction in determining to what grade he should relegate an aspiring candidate seeking the honors of the service. This is more especially the case with the engineers' licenses, but pilots and masters are also in the same category. The law, as now applied, is susceptible of too narrow an understanding, inasmuch, if a candidate is found worthy of the highest honors, he cannot receive a license equal to his merits. No coast or, ocean license is ever granted to a lake engineer or seaman, however qualified, unless he goes to salt water to get it, therefore this feature is soon likely to become a glaring evil in the service.

A CHANCE FOR BRIDGE BUILDERS.

THE citizens of Duluth, Minn., seem to have reconsidered their recent action endorsing the construction of a bridge across the entrance to their port and attention is now being directed to the feasibility of a railroad tunnel to connect Minnesota Point with Duluth. In so far as bridges are concerned, there is a wide field for improvement on the system of construction now in use at all lake ports, and it would no doubt be a paying investment for scientific and practical bridge-builders to devote time, attention and skill to the development of a modern span which would not require so much valuable space in the center of our crowded rivers and harbors as the present ancient structures take up. Given a clear river span of 240 feet, abutments of about 25 feet on each side, are now called for, and a center crib, or construction of stone and piles the width and length of the entire bridge is built in the center of the channel, which, with a bridge 35 feet wide, forms an unwarrantable obstruction of 40 by 190 feet, directly in the most advantageous portion of the river, and diminishes the original 240 feet width to a draw of only 75 feet on each side of the center of obstruction. A hundred of these nondescript swing bridges represent just so much loss of valuable river space and permanent obstructions in waterways already inadequate to accommodate the present tonnage and likely to become much more so as commerce increases.

DECAYING WHITE PINE JETTIES.

THE white pine jetties run out at the entrance of nearly all lake ports and dignified by the name of piers, are entirely behind the age and unworthy of the skill and talent expended in their original construction. The upper work of these apologies for piers become sun rent, dry and as inflammable as tinder during the summer months, and in the winter time every crevice that can hold water is filled and the continuity of destruction began almost before the work (if of any pretensions) is completed in its primal form. It would seem the height of folly for a private corporation to invest millions of dollars year after year in the constructive work of an adventure or improvement with the knowledge that at the termination thereof a series of annual repairs, in time equaling the first cost, would be needed to keep up the efficiency of the improvement. In other words, what is the life of an exposed white pine jetty, on which no repairs are made up to the time of its final decay. Such property would have a substantial and material value one year, but at a later period could exist only on paper, and we have many such cases on the lakes. In fact, dredging to get better water close up to the piles forming the docks and piers, is in some cases forbidden on account of the danger of undermining the entire fabric. It would appear to an unprofessional in the science of civil engineering, that the area over which a pier line was projected should at first be dredged down to hard-pan or level rock surface, and a concrete foundation with boundary walls of a permanent nature put in position. The only work of this nature at present in sight is that of the St. Mary's Falls canal and approaches, and some sections of the Buffalo breakwater. Most others are a good deal like rickety hen roosts or tiers of dry goods boxes strung along across a harbor front. The query presents itself: Has the construction of permanent improvements in river aud harbor work kept pace with the march of modern engineering?

WHAT CLASS SHOULD THE LAKES ADOPT?

The articles contained in the last several issues of THE MARINE RECORD on the classification of lake tonnage, has been followed up by energetic and important action on the part of shipbuilders, underwriters and classification societies, with a view to the adoption of such rules as would be universally accepted. A representative of the United States Standard Steamship Owners', Builders' and Underwriters' Association, L'd, of New York, held a preliminary meeting in Detroit last week at which several wooden shipbuilders were gathered for the purpose of formulating rules for the classification of wooden tonnage. A representative of "The Record of American and Foreign Shipping" issued by the American Shipmaster's Association, also secured the attention, in a marked degree, of builders and owners, and some tonnage now under construction, or contracted for, was placed in his hands for classification, and there is little doubt but that still more will be built under the "Record" class. A still further advance has been made however, in the appointment of a chief of the Bureau Veritas, with headquarters in Chicago, and we may look to see an energetic campaign on the lines of classification for lake tonnage in the near future. Already, underwriters are becoming curious to learn on what class of bottoms their millions are, and have been, at stake, yet, before the final adoption of any class or rating, we would suggest that a convention be called after the close of navigation and the representatives of the several class bureaux be asked to address underwriters, builders and owners on the merits and claims of their respective rules for the construction of all classes of lake tonnage, including iron, steel, composite and wooden, steam and sail vessels.

The assertion that a universally known class is essential or necessary for lake tonnage, may at first be thought somewhat of a too rapid advance from past methods, or, more strictly speaking, an unwarranted innovation on former customs. This is not so, however, and the advent of an inspection, survey, rating and classification society of universal repute on the lakes, but heralds the fact that the tonnage now represents seventy million dollars, instead of as formerly, only a moiety of this vast sum, representing, as it did, so insignificant a portion of the world's tonnage, that local ideas, however susceptible of being improved upon, were thought amply sufficient to protect the minor interests at stake, as bounded by the underwriters' view of the horizon of lake commerce.

All interests would do well to keep in mind that the rules of the associations now seeking to rate and classify lake tonnage, are somewhat more pronounced and arbitrary than those which have hitherto obtained. This feature is absolutely necessary in order to beget and maintain confidence in the work of the bureaux, and so it follows, that a vessel's class is the first and positive index of her value at the time of her launch, throughout her career, or in whatever portion of the world she may be engaged. By this means an underwriter, owner, shipper, consignee, intending purchaser, etc., can rely on the class and rating determined by the competent and careful surveys of disinterested inspectors, whose findings are issued by a universally recognized authority. Hence, none other than the most gratifying results can be brought about through the introduction of a system of classification for at least iron and steel lake built tonnage. When this is accomplished, the mercantile marine of the Great Lakes will be on a par, or at least take its proper rank with the tonnage of the world and be officially recognized as a factor in the lists of universally known American tonnage, and no longer be ignored and unknown outside of domestic or local limits.

Seeing that the time is approaching for vessel owners to accept the ratings of a classification bureau, the query arises: What class should the lakes adopt? A list of the classification societies of the world was contained in our last issue, yet, this may certainly be narrowed down to a choice of not more than two, and, furthermore, it may be found that the acme of discretion in maritime affairs might be better subserved by the ultimate adoption of one standard for the inspection, survey, class, and rating of all lake tonnage.

ON HANDLING ROW-BOATS IN A SEA-WAY.

As the fall season is again approaching, it is probable that lake seamen will be called upon to undertake more or less handling of row-boats in a sea-way before navigation is brought to a close.

A brief article under this caption may be the means of imparting a knowledge gained by others under similarly trying circumstances, and there can be no easier way of acquiring a perception of the requisites, mode of action, and what to expect, than by a perusal of the experiences of those who have gone before.

In getting a boat over the side in heavy weather, care should be taken to float her in the most protected spot, and this may be found abaft the beam, to leeward, when the vessel is brought to the wind. The equipment of the boat and a couple of hands in her previous to lowering in the water, will, of course, have been attended to, when the essential, of having a good long painter led from well forward is of vital importance. In this connection it would be well to note that the majority of boats launched from the rail, fill, capsize, or are bilged, so that, although it may be the speediest and handiest way of putting a boat into the water, it is seldom of any avail in a sea-way, and the ship-shape way is the best. In going alongside of a wreck or hull in open water, the same conditions exist in so far as boarding to leeward, long painter, etc., is concerned, always having in view any wreckage which may be, or is likely to be, experienced to leeward. In such cases the ends of a vessel is

the safest place to approach, and only by dropping down to leeward from an anchor should the weather side of a stranded vessel be approached near enough to effect a rescue.

Once clear of the ship, in a case of abandonment, the question arises, how can the small boat be handled to live longest? Being picked up, or reaching the shore, is a secondary consideration, and need not trouble the minds of the castaways at such a time. As a general rule, a small boat, skillfully handled, is in the safest position bowing the sea, trimmed a trifle by the head, and steered with an oar. The rule of management is to give the boat ascending power or velocity to ride up the face of the approaching sea. Once past the crest, with the boat in a horizontal position, ease may be taken at the oars on the back of the sea, or until the next ascent is met with, when a few good steady strokes is necessary as before. In the event of having no oars or oarsmen fit to so handle the small boat, the essential, which the writer believes is in giving headway enough to breast and ride over the wave, may be secured by tending a drogue given a liberal drift. By hauling in on the drogue line the boat is given a sufficient momentum to reach the crest of the wave, and the line, may be slacked away to the full drift again when the boat passes the horizontal point, or when she is descending on the back of the wave. There is, however, imminent danger of a boat being placed in such a position as to meet the break or curl on the crest of a wave, a few feet from which, on either side, is what may be termed solid water. In such a case good oarsmen are necessary to allow the person steering to exercise all possible skill in trying to avoid or dodge the break so as not to meet it at the instant of its curling over.

If the condition or location is such that it becomes necessary, or is thought advisable to run before the sea, and the boat has to be turned around, the moment of greatest danger is in performing the evolution. Having accomplished this, broaching-to is the chief feature that would have to be guarded against, and the motion of the boat kept under command, so as to obviate the easily brought about certainty of a broach-to and a consequent capsize. The method of handling a boat in running before a sea is much the same as when bowing it, most boats working best trimmed slightly by the stern. A good method in a sea-way is to back-water up the face of the sea and row sturdily along on the back of it at the moment the crest is passed, repeating the same tactics for each sea. If a boat has not sufficient inertness to allow the sea to pass, her stern is caught on the advancing crest, and she is carried bow down on the face or front of the sea, in imminent danger of being turned end over end, or by getting broadside, capsizing.

Landing in broken water, or a surf, is by far the most dangerous work that can be given to the occupants of a small boat, and many well tried ways of effecting a safe landing are in vogue in different localities and under varying conditions. To many it would no doubt be thought simply suicidal if the occupants were to half turn a boat around and allow her to be thrown broadside on the beach, at the risk of a capsize or perhaps two or three of them; yet, such is the most efficient plan when trying to effect a landing on a steep beach. If on a flat or gradually shoaling beach the boat may be kept end on until she grounds, when the crew can jump out and drag their boat clear of the reach of the surf.

In the customary landing of boats through broken water, a buoy is sometimes moored just outside the edge of the breakers. The boat is then kept head to sea and backed in, the buoy line being handled to prevent the boat from broaching-to. This method is also used without the buoy, although a drogue could be easily prepared and be of valuable assistance where no buoy was moored to drop her in from; especially is it of importance to back a square stern boat in, allowing her head to bow the sea.

Well and skillfully handled, it is almost incredible even to experienced seamen, the terribly hard weather that an ordinary small boat can live through, yet all depends on the way they are treated, as it requires but a slight lack of experience or attention to drown a boat that under other circumstances would prove capable of doing all that could possibly be expected of her, and this is saying a great deal. Life-boats equipped and manned as the United States Life Saving Service now exact, are fit to live in almost any weather, and when once afloat, clear of the surf breaking in on the beach, are as safe, seaworthy and reliable as any object afloat, but even they must be skillfully handled, and when men are trained to acquire an understanding of what they have to contend against, the small boat is not unfrequently as safe as the big boat in the special uses for which it is intended. The kindest way, then, to place a small boat in a sea-way is to bow it, giving only speed enough to mount the approach, and keeping her always under control. The most difficult feat is in turning a boat around in a sea-way, and should seldom or never be attempted in a short, nasty sea, though easily done in a long swell. Running before a sea, the same tactics are pursued as in bowing it, until the crest is reached, when it is safe to row in strongly on the back of it. Broaching-to and getting into broken water or surf are the points to be carefully watched and avoided. Judicious trimming of weights towards the ends often helps a small boat to take the sea kinder, and lessens the chances of broaching-to.

LAKE FREIGHT SITUATION.

At present the outlook affords but a moderate show of encouragement, and it is certain that the handsome freights of a year ago will not obtain during the closing weeks of the present season. In the Red River Valley and other parts of the wheat-raising districts, heavy mid-summer rains flooded the wheat fields and the result in a large portion of that country is that the yield has only been about one-third of last year's. The crop has nowhere equalled that of 1891, and the consequence is a great diminution in the amount of wheat to come forward and this is slow moving on account of the market conditions.

The ore receipts for the season are far in excess of last year's at all lower lake ports, and there is little ore outside of that covered by contracts, which really must come down this season. At the same time, if the present weather continues, the boats must get better freights to recompense them for the delays consequent upon the hard weather which they will soon have to encounter. Judging from present indications it would not be surprising if the season closed somewhat early for all but the largest carriers.

The Ashland ore rate was still $1.20 Wednesday, but was not over strong at that. Marquette tonnage has been placed at $1.05, and some say still less than that. The Escanaba rate continues steady at 75 cents for Ohio ports. A steamer which had to discharge at two different docks in Buffalo was placed several days ago at 80 cents, and since then several other cargoes have paid the same figure to that port, although it seems to have been simply a case of "follow your leader" as there has been no apparent reason for the five cent extra rate to Buffalo under existing conditions.

There is little or no coal at Ohio ports on account of the scarcity of railroad cars, but Buffalo has a fair supply and good living rates are being paid for its transportation to Lake Michigan ports, rates now quoted are Racine 70 cents, Milwaukee 60 cents and Chicago 65 cents. The wheat rate to Buffalo at Chicago is now 2¼ cents and at Duluth 3½ cents, steady, but not strong.

Lumber carriers continue in good demand at the following rates: Bay City, Saginaw, Cheboygan, Alpena, or Oscoda, to Detroit or Ohio ports, $1.50; to Buffalo or Tonawanda, $1.75; Marquette to Ohio, $2.37½; Menominee to Tonawanda, $2; Traverse Bay to Ohio, hardwood, $2.75; one and two inch, Ashland and Ontonagon to Chicago, $3.50; Oscoda to Chicago, $2.25 for dry lumber.

PETITION TO THE SECRETARY OF THE TREASURY.

Col. Ludlow's status with the Light-House Board is still unchanged, though the vessel interests stick right loyally together for his re-instatement, as also that of Commander Oscar F. Heyerman, whose district duties were suspended at the same time.

The following petition is being circulated and signed by vessel owners and masters. Copies have been sent to several lake ports for signatures:

To the Honorable Charles Foster, Secretary of the Treasury: The undersigned, owners of vessels and others having direct financial interests in lake commerce, respectfully urge that the district officers of the ninth and eleventh light-house districts, Col. Ludlow and Commander Heyerman, be restored to duty in their former positions.

These officers have been efficient, earnest, intelligent and successful in the performance of their duties, to the manifest benefits of the interests depending on the proper discharge of their service. Nowhere was this more directly shown than in the final plan urged by these officers for lighting St. Mary's river, which plan has been fully approved and authorized, thereby justifying the district officers in deferring the execution of the erroneous instructions given them, and seeking to have them corrected to conform with the facts, as has been done.

CASUALTIES OF THE WEEK.

The schooner Mary B. Hale went ashore at Manitowoc, Wis., last Sunday morning and became a total loss.

Great anxiety is experienced at the time of our going to press regarding the safety of the steam barge Nashua with several passengers. Capt. Peterson, of the steamer W. H. Gratwick, reported on arriving at Port Huron that he had searched for four hours for the missing steamer, but could find nothing of her or the crew, although her consort arrived in port all safe on Tuesday.

MORE NEW LAKE STEAMERS.

The Ogdensburg Transit Co., which is operated in connection with the Vermont Central Railway, will replace the W. A. Haskell, Walter L. Frost, and W. J. Averill with new steel steamers of greater carrying capacity. Negotiations to this end are now in progress with the Detroit Drydock Co. The estimated cost of the new boats is about $200,000 each. The three wooden boats mentioned above are valued at $290,000. Mr. Alex. McVittie, and consulting engineer Frank E. Kirby, of the Detroit Drydock Co., visited Ogdensburg a few days ago, but it is not yet known that the contract has been finally closed. It is a foregone conclusion, however, that any tonnage the Vermont Central Line require, will be built by the Detroit Drydock Co., as the fleet built by the compaay for that line have proved of the highest class and efficiency throughout. A Buffalo contract for a new steamer has also been placed during the week, and still others are talked of.

INSPECTION OF STEAMERS IN THE CUYAHOGA DISTRICT.

The following steamers in the Cuyahoga district, whose certificates expire on the given dates, will be inspected during the month of October by the United States local inspectors of hulls and boilers, Cleveland, Ohio: Oct. 2, S. C. Schenck, Toledo; Oct. 6, George B. Dixon, Cleveland; Oct. 8, Florence, Sandusky; Oct. 8, Clara, Port Clinton; Oct. 8, Mignon, Port Clinton; Oct. 9, Edwin Eddy, Toledo; Oct. 9, Lizzie, Toledo; Oct. 9, John M. Edson, Toledo; October 9, Ella G., Toledo; Oct. 9, Robert Greenhalgh, Jr., Cleveland; Oct. 10, Ann Arbor, No. 1, Toledo; Oct. 10, Cherokee, Harbor; Oct. 12, Atlantic, Cleveland; Oct. 18, Myrtle, Cleveland; Oct. 19, E. B. Toiwo, Fairport; Oct. 20, Comanche, Cleveland; Oct. 24, Wadena, Cleveland; Oct. 24, Wadena Launch, Cleveland; Oct. 24, J. L. Weatherby, Cleveland; Oct. 28, George E. Fisher, Huron; Oct. 30, Welcome, Sandusky.

Besides the inspection and testing of the foregoing list of steam vessels, the examination of candidates for engineers, pilots and master's licenses, the testing of material entering into the construction of marine boilers and the general routine office work has to be carried out. Captains DeWolf and Gould are the inspectors of hulls, and Messrs. McGrath and Plietz the boiler inspectors. Too much credit cannot be given these efficient officers, and Clerk Edward Lawlor, for the prompt and reliable service furnished to the marine community in the Cuyahoga district.

THE LIGHT-HOUSE BOARD'S ESTIMATES.

Special Correspondence to The Marine Record.

WASHINGTON, D. C.—The Light-House Board is keenly alive to the further requirements which the increasing importance of the lake marine now demand. Estimates have already been compiled for a large number of new aids to navigation on the lakes, though the largest item of expenditure is for a light-house tender for the Ninth district, for which a sum of $95,000 is included in the estimates for the ensuing fiscal year, and $4,000 for a patrol steamer, to be placed on St. Mary's river; $29,500 is also asked for to buoy the lake front at Chicago, on account of the World's Fair, besides which a further sum of $15,500 is required for completing the light-house and fog signal at Chicago outer breakwater. The other items contained in the estimates are as follows: Big Sable, Mich., $5,500; light station, Carlton, Lake Ontario, $8,600; light and fog signal, Chequamegon Point, Wis., $1,000; light, Devil's Island, Wis., $22,000; fog signal, Pere Marquette, $5,500; light, Bayfield, Wis., $5,000; temporary floating lights on Bay State and Old Point shoals, Lake Ontario, $8,000; range lights, Grosse Point, $800; fog signal, Oswego, N. Y., $4,300; fog signal, Escanaba, $1,100; fog signal, South Fox island, Mich., $5,500; fog signal, Tibbett's Point, N. Y., $4,300; light station, Wilson Harbor, N. Y., $2,500; light station, Manitowoc, $5,500; light station, Mandata, $7,500; light and fog signal, Gladstone, Mich., $10,000; light and fog bell, Grand Marais, Mich., $15,000; light and fog signal, Little Gull island, Mich., $20,000; light station, mouth of Eagle river, Mich., $20,000; light and fog signal, Fairport, O., $4,700; light and fog signal, Forty Mile Point, Mich., $25,000; fog signal, Eagle Harbor, Mich., $5,500; fog signal, Gallop island, Lake Ontario, $5,700; range lights, Maumee, O., $4,100; range lights, Menasha, Mich., $500; light station, Old Mackinac Point, $1,100; light station, Poe's Reef, Mich., $25,000; light and fog signal, North Manitou, Mich., $20,000; light, Port Clinton, O., $1,500; light and fog signal, Ludington, Mich., $4,500; light and fog signal, Portage lake $9,000; fog signal, Presque isle, $4,500; light and fog signal station, Round island, Mich., $15,000; fog signals, St. Joseph, Mich., $5,000; light station, St. Mary's island, Mich., $15,000.

MARITIME LAW.

COLLISION—VESSEL MOORING ALONGSIDE TAKES RISK OF BAD LANDING.

U. S. District Court, Southern District of New York.

A tug attempted to land a heavy schooner outside of a light canal boat lying at a dock. The tide at the time was running strongly. Both the tug and the schooner concurred in the attempt and both were active in making landing. The schooner fetched up alongside the canalboat heavily, doing her some damage for which this libel was filed. Held, that the landing was at the risk of the vessels attempting to moor, and as both tug and schooner participated in it, both were liable for the libellants damages.

BROWN J.

SALVAGE—FIRE—DIFFERENT SALVORS—RIGHT TO RECOVER.

U. S. District Court, Southern District of New York.

Fire broke out on a lighter lying in a slip at New York City. The city fire department played on the fire, and shortly afterwards came two tugs which pumped water on the flames. Afterwards came the city fire boat, to which one of the tugs gave up her place. The value of the property saved was $17,000; one tug was worth $15,000 the other $12,000. On suit for salvage award by the tugs, the lighter defended by averring that the fire department would have extinguished the flames without aid from the tugs. Held, that although subsequent events sometimes show that of several salvors those arriving late could have been dispensed with, such salvors are not of necessity deprived of all share in the award. One tug was therefore awarded $200, the other $75.

BROWN J.

Judge Jenkins, in the United States Court at Milwaukee, Wis., has rendered a second decision in the celebrated Armour-Marion collision case, denying a motion for a new trial and holding, as he did before, that both steamers were at fault, and that the damages should be divided between them. The case grew out of the collision of the steamers in the St. Clair River, September 7, 1889, the Armour being sent to the bottom in 60 feet of water, though subsequently raised and repaired at a great expense.

THE CALEDONIA.

District Court, D. Massachusetts.

SHIPPING—UNSEAWORTHY VESSEL—WEAK SHAFT.

When a steamer's propeller shaft, which had been long in use, broke in fair weather, when the ship was under ordinary full speed, and no wreckage lay about or rock that could have been struck, and the shaft showed no flaw on subsequent examination, the court found that the shaft was weak, before the vessel left port, and held, that this constituted such a defect as to render the ship unseaworthy at the commencement of her voyage, and her owner liable for damages arising out of such conditions.

2 SAME—DAMAGES—DELAY—LOSS OF WEIGHT.

When a shipper of cattle furnished sufficient provisions to last during an ordinary voyage, but, owing to the unseaworthiness of the ship, the voyage was unduly prolonged, held, that the ship was liable for the shrinkage in the weight of the cattle occasioned by lack of provisions.

3. SAME—FALL IN MARKET PRICE.

In the usual course of the business of shipping cattle abroad, they are sold immediately on arrival, which fact was known to the ship agent when the contract for transportation was signed. Owing to the unseaworthiness of a ship, the voyage was prolonged 20 days, during which the market price of the cattle fell. Held that the ship was liable for the shipper's loss caused by the fall in the market price.

In Admiralty. Libel by shipper of cattle for damages arising out of the breaking of the shaft of the steamship Caledonia. Decree for libelant. Affirmed on Appeal, 43 Fed. Rep. 681.

NELSON, District Judge.

KINSMAN VS. CHINA MUTUAL INSURANCE CO.

District Court D. Massachusetts. Dec. 7, 1891.

MARINE INSURANCE—INSURABLE INTEREST—TOTAL LOSS.

Where it appeared that libelant had an insurable interest in a vessel by reason of advances exceding the amount of the policy sued on, and that the vessel had sustained damage from perils of the sea, and could not be made seaworthy except at an expense exceeding her value when repaired, thus constituting a total loss, within the meaning of the policy, held, that libelant was entitled to recover against the insurance company the amount of the policy.

INSURABLE INTEREST UNDER MARITIME LOAN.

The Cassa Marittima advanced money on a vessel and its freight, and took from an insurance company a policy of insurance against the loss of the vessel from the dangers of the sea. It also took from the master, an instrument securing the loan on the vessel and its freight earnings, and providing, among other things, that the owner or master should not take any other advances upon the vessel or its earnings, at the port of loading, but that, if they did, they should be bound to return the present loan to the plaintiff, even though the vessel should be lost. The master violated this provision by procuring other advances at the port of loading. The vessel was lost. The subsequent loan being procured by the master, without the knowledge or consent of the Cassa Marittima, its insurable interest in the vessel and freight was not impaired by reason of the violation of that provision, and it might proceed against the master or owner, or against defendant upon the policy of insurance, at its election. The insurable interest in such a case was not affected by any personal liability of the master in taking the subsequent advances.

COMPARATIVE TONNAGE.

It will be interesting to compare the traffic at Chicago and Buffalo, the two principal lake ports, with that of important ports on the coast of the United States and in foreign countries. The following table, compiled by the Bureau of Statistics, shows the registered vessel tonnage arriving and departing at principal ports of the world, in so far as the same can be ascertained.

Tonnage of vessels entered and cleared at the below-named European and American ports during the year ending December, 31, 1890.

[From official publications and custom-house reports.]

Ports.	Foreign trade.		Coastwise trade.		Total.		Total vessel tonnage of port.
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*	*Tons.*
United Kingdom:							
London	7,708,705	5,772,062	5,432,750	2,049,017	13,141,455	7,821,079	20,962,534
Liverpool	5,782,351	5,139,490	2,626,027	3,053,593	8,408,378	8,213,043	16,621,421
Bristol	656,971	221,180	674,076	1,006,867	1,231,047	1,228,047	2,459,094
Hull	1,907,138	1,665,996	583,297	875,451	2,530,435	2,551,447	5,081,882
Glasgow	1,121,700	1,697,662	1,752,855	1,405,643	2,874,545	3,103,305	5,977,850
France:							
Havre	2,159,213	2,259,663	(*)	(*)	.....	.....	.....
Marseilles	3,579,889	3,812,667	(*)	(*)	.....	.....	.....
Belgium, Antwerp	4,106,678	4,097,321	(*)	(*)	.....	.....	.....
Germany:							
Hamburg	5,202,825	5,214,271	(*)	(*)	.....	.....	.....
Bremen	1,733,809	1,747,960	(*)	(*)	.....	.....	.....
United States:							
New York	6,489,777	6,156,778	(*)	(*)	.....	.....	.....
Boston	1,464,678	1,211,709	(*)	(*)	.....	.....	.....
Baltimore	820,887	1,110,064	(*)	(*)	.....	.....	.....
Philadelphia	,01	1,130,165	(*)	(*)	.....	.....	.....
San Francisco	904,060	1,032,823	(*)	(*)	.....	.....	.....
New Orleans	960,966	959,361	(*)	(*)	.....	.....	.....
Chicago †	65,611	127,219	5,072,642	5,023,296	5,138,253	5,150,615	10,288,868
Buffalo†	222,329	202,507	4,590,158	4,545,596	4,812,487	4,748,103	9,560,590

* No Data. † Including South Chicago. ‡ Year 1891, including Tonawanda.

It is unfortunate that for some of the ports named in the above table, data are not available in the case of the coastwise tonnage. There is abundant material, however, for a most instructive and interesting comparison. From the foregoing table it appears that the vessel tonnage entering and clearing at Chicago is about one-half of that which enters and clears at London, the principal port of the world. It is nearly two-thirds as great as the total Liverpool tonnage, and greatly exceeds that of any other port in the United Kingdom. It nearly equals the total tonnage arriving and clearing at New York in the foreign trade, and exceeds the combined tonnage entering and clearing in the foreign trade at the ports of Boston, Baltimore, Philadelphia and San Francisco. It nearly equals the total tonnage in the foreign trade at Hamburg, which is chief among the German ports, and exceeds by a large margin the foreign tonnage at Antwerp. From the above table it is safe to say that London stands first among the maritime ports of the world. If the coastwise tonnage of New York were added to its foreign tonnage, that port would probably dispute the second place with Liverpool. Hamburg would occupy fourth position, and there is every reason to believe that the fifth and sixth positions would fall to Chicago and Buffalo. The coastwise tonnage of Antwerp, which is practically the only Belgian port of any importance, must be entirely insignificant. With the possible exception of Marseilles, no other port in the table above given could successfully dispute with the two lake ports the positions accorded to them above. Certainly no American port except New York approaches the two leading lake ports in the amount of shipping, arriving and clearing. Nor is the traffic of these lake ports a short-distance traffic. Take for example the Buffalo business. It is 900 miles from Buffalo to Chicago, and 1,000 miles from Buffalo to Duluth. The traffic over these two routes constitutes a very large proportion of the business of the port of Buffalo.

TOO LATE.

A short time ago I happened to make one of a merry party traveling on a western river steamer. Every one was on the keen lookout for any amusement, when at one of the landings, a pair of originals came on board, who had very much the air of an eloping couple. The man was a tall, raw-boned specimen of the half-horse, half alligator class of westerners that are playfully termed hoosiers, by people of a sarcastic turn of mind. Amongst those passengers who did not belong to our party was a solemn, portentious looking individual, whom every one set down as a traveling preacher.

Towards night, while the fun was at its height in the brilliantly lighted saloon of the steamer, I was conversing on the quarter deck with the supposed reverend gentleman, when a young man stepped up and said to him: We are going to have a wedding down stairs and want you to officiate as pastor."

"All right," he replied, laughingly, and we proceeded to the ladies' cabin, where the couple of hoosiers stood awaiting unity, surrounded by a chattering group of extempore groomsmen and bridesmaids. There had been several innocent kissing matches and mock marriages during the trip, and this was supposed at the time to be a continuation of the rather exaggerated merriment, and so also thought the whilom preacher. The couple stood up before him and the officiating priest asked the necessary questions. Then in the usual way he pronounced them man and wife amidst the applause of the bystanders.

After some time the mock preacher was about to retire, and had, in fact, pulled off his coat, vest and one boot, when one of the colored stewards came and told him that the couple he had married in a joke had taken the thing in dead earnest, and had retired to the same stateroom. In horror at the enormity of the mistake he had made, the clerical looking gentleman rushed to the stateroom just as he was, and rapped fast and furiously at the door. Getting no reply he yelled out at the top of his voice in his agitation:

"For heaven's sake! I'm not a preacher, I'm only a plain citizen."

The whole ship was aroused. Every stateroom around opened at the noise, and the travelers stood around in groups discussing the affair in whispers. Suddenly the stateroom door of the couple opened slowly and the old gentleman ceased his pounding. The head of the male occupant protruded from the doorway, and, amidst the impressive silence that followed he said coolly and calmly: "Too late, ole hoss; you're too late."—*Ex.*

HIGHLY PRIZED PRAISE.

THE MARINE RECORD, of Cleveland, O., has recently enlarged its size and made many improvements in its pages. Our contemporary is to be congratulated on these evidences of a well-deserved prosperity. It is an excellent exponent and advocate of the marine interests of the lakes.—*The Railroad and Engineering Journal, New York.*

THE MARINE RECORD, of Cleveland, O., the leading paper in its line in that section of country, has taken to itself a cover, and is otherwise greatly improved in its make-up, general appearance, walk and carriage. It speaks for itself in its new dress, and in no uncertain tone; it has our best wishes. It is always on the right side of all questions, and is a sincere friend of marine engineers. Sincerity is a great virtue. May it live long and prosper!—*The Engineer, New York.*

THE MARINE RECORD., of Cleveland, devoted to the interests of our "inland seas," improves with age. It now contains sixteen large pages, besides a neat cover. Counting the cover, it is a 20-paged paper, or more properly speaking, magazine. The general make-up has been improved, the advertisements made more striking, the general typographical appearance is good. In fact, THE MARINE RECORD puts on airs of general prosperity. It is a reliable source for marine news and worthy the patronage it receives.—*Cleveland Advocate.*

PROPOSALS.

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid Avenue, Cleveland, Ohio, September 20, 1892. Sealed proposals for dredging in straight channel, through Maumee Bay, for Toledo Harbor, Ohio, will be received at this office until 2 o'clock, p. m., of Saturday, October 15, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Lieut. Col., Corps of Engineers, U. S. A. 3t

UNITED STATES ENGINEER OFfice, 34 West Congress street, Detroit, Mich., September 8, 1892. Sealed proposals for furnishing by the hour 1 dredge, 1 tug and 2 dump scows, for use at Detroit River, Mich., will be received at this office until 2 p. m., October 8, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. O. M., POE, Colonel, Corps of Engineers, etc. 9-15-10-6

JEFFERSONVILLE, IND., OCTOBER 1, 1892. Sealed proposals, in triplicate, will be received here until 11 o'clock, a.m., (central standard time) Tuesday, the 1st day of November, 1892, for furnishing at the Q. M. Depot here, 100,000 gallons of Mineral Oil, of 135° flash test, in cases of two five-gallon cans each. Government reserves right to reject any or all proposals, and to accept the whole quantity or any portion of the mineral oil bid for. All information furnished on application here. Envelopes containing proposals should be marked "Proposals for Mineral Oil," and addressed to COL. HENRY C. HODGES, Assistant Qurtermaster General, U. S. Army, DepotaQuartermaster. 298